

Module/framework/package	Name and a brief description of the algorithm	An example of a situation	Link
Base R	IRLS applies repeated minimal adjustments to weight values to minimize observational-predicted value differences.	The need for simple built-in R tools surpasses Python Scikit-learn when working with 100-row datasets because R offers a more streamlined approach.	https://www.rdocumentation.org/packages/stats/versions/3.6.2/topics/family
Big data version of R	The IRLS algorithm can operate with parallelization features through biglm for handling big datasets across different computing units.	The IRLS algorithm can operate with parallelization features through biglm for handling big datasets across different computing units.	https://rdr.io/cran/bigFastlm/man/bigLm.html
Dask ML	To enhance distributed performance and handle small data subsets Stochastic Gradient Descent (SGD) operates by making parameter changes that follow incrementally small data batch updates.	It takes less time to process a 20GB or 30GB dataset through a cluster operating system than base R or python.	https://www.datacamp.com/tutorial/stochastic-gradient-descent
Spark R	IRLS with distributed optimization operates in the same manner as base R's IRLS but uses distributed optimization capabilities of Spark for processing big data.	By using a Spark cluster the GLM model fits efficiently to 100M customer data rows whereas base R cannot achieve such speed. or Scikit-learn on a single machine	https://rdr.io/cran/bigFastlm/man/bigLm.html
Spark optimization	The algorithm employs Iterative	The model optimizes	https://journalofbigdata.springeropen.co

	Reweighted Least Squares (IRLS) that splits the weighted least squares subproblem resolution across the Spark cluster.	generalized linear models on datasets exceeding 1TB using many features to achieve superior performance compared to base R's IRLS. Also Scikit-learn (not distributed)	m/articles/10.1186/s40537-017-0084-5
Scikit-learn	An optimal version of single-machine Lasso coordinate descent operates for logistic regression.	The GLM model trains faster than base R's IRLS when working on a 10,000-row dataset because of efficient C++ backend implementation.	https://xavierbourretsicotte.github.io/coordinate_descent.html